IN THE CLAIMS

Please amend the claims as follows:

Claims 1-22 (Canceled).

Claim 23 (Currently Amended): A surface plasmon microsensor or nanosensor for chemical or biological species, comprising:

metallic, cylindrical pads distributed on the surface of a support, the pads having a thickness between 10 nm and 500 nm ~~including at least one electrically conductive material~~ and configured to immobilize the chemical or biological species, and the pads having a dimension, other than the thickness, that is less than 1 μm.

Claim 24 (Previously Presented): A microsensor or nanosensor according to claim 23, wherein the pads are distributed on the surface of the support according to a two-dimensional matrix.

Claim 25 (Previously Presented): A microsensor or nanosensor according to claim 23, wherein the pads have a section in a shape of a circle or an ellipse.

Claim 26 (Previously Presented): A microsensor according to claim 25, wherein the section of the pads has its largest dimension between 0.5 μm and 1 μm.

Claim 27 (Previously Presented): A microsensor or nanosensor according to claim 25, wherein the section of the pads has its largest dimension less than 0.5 μm.

Claim 28 (Previously Presented): A microsensor or nanosensor according to claim 23, comprising at least first and second networks of pads, a shape of a section of the pads of the first network being different from a shape of a section of pads of the second network.

Claim 29 (Currently Amended): A microsensor or nanosensor according to claim 23, wherein the ~~electrically conductive material is~~ pads include gold or silver.

Claim 30 (Previously Presented): A microsensor or nanosensor according to claim 23, wherein the pads are formed by superposition of at least two different metallic layers.

Claim 31 (Currently Amended): A microsensor or nanosensor according to claim 23, wherein the pads ~~are formed by superposition of~~ include a metallic layer integral with the support and an ultra thin layer of a material enabling attachment of the chemical or biological species.

Claim 32 (Previously Presented): A microsensor or nanosensor according to claim 23, wherein the surface of the support is a surface of a material chosen among dielectric materials, semiconductor materials, and metallic materials.

Claim 33 (Previously Presented): A microsensor or nanosensor according to claim 23, further comprising means for increasing sensitivity of the sensor.

Claim 34 (Previously Presented): A microsensor or nanosensor according to claim 33, wherein the means for increasing the sensitivity of the sensor includes a thin metallic film deposited on the surface of the support.

Claim 35 (Previously Presented): A microsensor or nanosensor according to claim 34, wherein a thin dielectric film is intercalated between the thin metallic film and the pads to adjust plasmon resonance as a function of thickness of the dielectric layer.

Claim 36 (Previously Presented): A microsensor or nanosensor according to claim 33, wherein the means for increasing the sensitivity of the sensor includes a planer wave guide configured to convey a guided electromagnetic mode, the planar wave guide being formed on the surface or under the surface of the support and under the pads.

Claim 37 (Previously Presented): A microsensor or nanosensor according to claim 33, wherein the means for increasing the sensitivity of the sensor is constituted by grouping together of pads, a distance separating the grouped together pads being sufficiently small to allow an electromagnetic coupling between the grouped together pads.

Claim 38 (Previously Presented): A microsensor or nanosensor according to claim 33, wherein the pads having a section in a form of an ellipse, and the means for increasing the sensitivity of the sensor is constituted by a small distance separating an end of a pad along the major axis of the ellipse from the end of the adjacent pad along the major axis of the ellipse, this small distance enabling an electromagnetic coupling between the pads.

Claim 39 (Previously Presented): A microsensor or nanosensor according to claim 33, wherein the means for increasing the sensitivity of the sensor includes at least one particle associated with a pad.

Claim 40 (Previously Presented): A microsensor or nanosensor according to claim 39, wherein the at least one particle is chosen from the group composed of metallic particles and fluorescent particles.

Claim 41 (Previously Presented): A microsensor or nanosensor according to claim 39, wherein the at least one particle is a particle fixed to the chemical or biological species.

Claim 42 (Previously Presented): A microsensor or nanosensor according to claim 39, wherein the at least one particle is fixed to an object intended to be placed near to a pad.

Claim 43 (Previously Presented): A microsensor or nanosensor according to claim 42, wherein the object is the tip of a near field optical microscope.

Claim 44 (Previously Presented): Use of the microsensor or the nanosensor according to claim 23 to carry out Raman spectroscopy at a level of detection by a reading system for identification of the chemical or biological species immobilized on the pads of the microsensor or the nanosensor.

Claim 45 (Previously Presented): A surface plasmon microsensor or nanosensor according to claim 23, wherein each of said pads has a surface that sustains surface plasmons at a first plasmon resonance wavelength when said chemical or biological species are not immobilized on said surface and sustains surface plasmons at a second plasmon resonance wavelength when said chemical or biological species are immobilized on said surface, wherein said first and second resonance wavelengths are shifted from each other by a detectable amount.

Claim 46 (Previously Presented): A surface plasmon microsensor or nanosensor according to claim 45, wherein said first and second resonance wavelengths are shifted by an amount detectable by Raman spectroscopy.

Claim 47 (Previously Presented): A surface plasmon microsensor or nanosensor according to claim 46, wherein said surface of each of said pads sustains localized surface plasmons at said first and second plasmon resonance wavelengths, wherein said localized surface plasmons propagate on said surface over distances less than a wavelength of a light exciting said localized surface plasmons on said surface.

Claims 48-49 (Canceled).

Claim 50 (Currently Amended): A surface plasmon micorsensor according to claim [[49]] 23, wherein each of said pads has a diameter from 0.5 to 1 μm and a height from 20 to 500 nm, and wherein said pads have centers spaced from each other at a distance of 5 μm to 300 μm.

Claim 51 (Currently Amended): A surface plasmon nanosensor according to claim [[49]] 23, wherein each of said pads has a diameter from 20 to 100 nm and a height from 10 to 20 nm, and wherein said pads are spaced from each other at a distance of 100 nm to 500nm.

Claim 52 (Currently Amended): A surface plasmon microsensor or nanosensor according to claim [[48]] 23, wherein a first plurality of said pads has a circular section and a second plurality of said pads has an elliptical section.

Claim 53 (Currently Amended): A surface plasmon microsensor or nanosensor according to claim [[48]] 23, wherein a first plurality of said pads are geometrically configured so as to sustain surface plasmons at a first plasmon resonance wavelength when said chemical or biological species are immobilized on said pads of said first plurality, and a second plurality of said pads are geometrically configured so as to sustain surface plasmons at a second plasmon resonance wavelength when said chemical or biological species are immobilized on said pads of said second plurality, wherein said first and second plasmon resonance wavelengths are different from each other.